



# Coordination of Wildlife Conservation with Transportation Projects











# Why Reptiles and Amphibians?

- Limited range





# Why Reptiles and Amphibians?



- Annual movement



# Why Reptiles and Amphibians?



- Annual movement





# Why Reptiles and Amphibians?



- Annual movement



# Why Reptiles and Amphibians?



- **Movement within contiguous habitat**



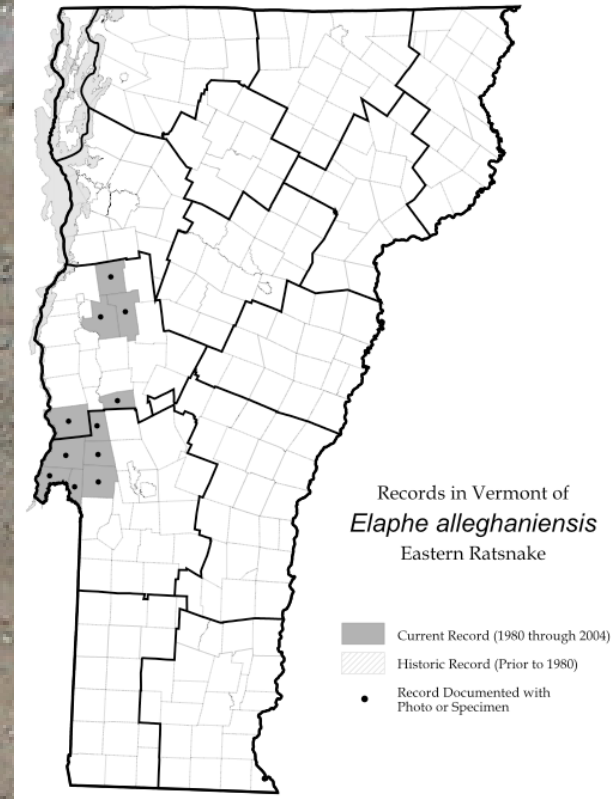
# Why Reptiles and Amphibians?



- Recolonization movements



# Why Reptiles and Amphibians?

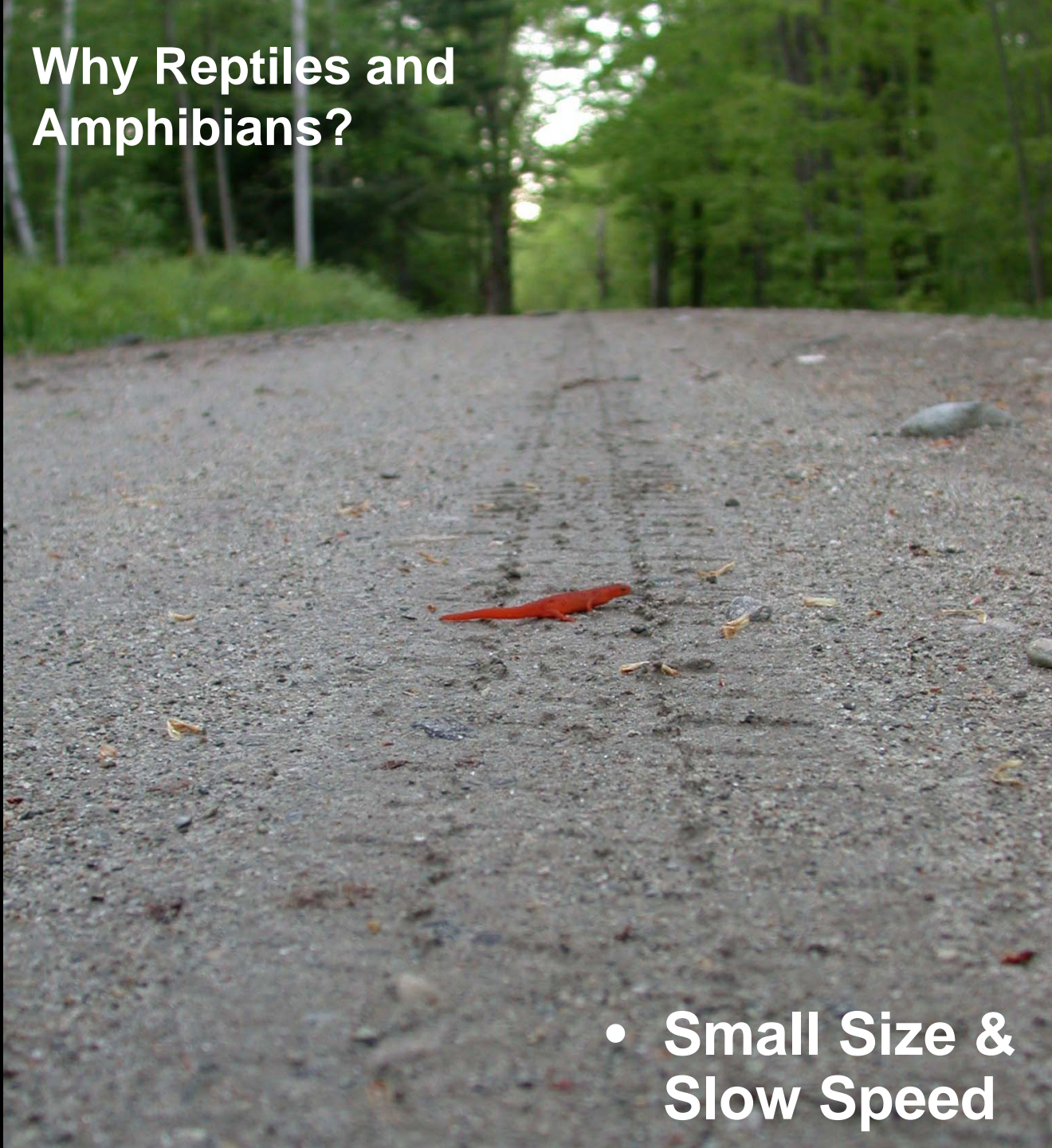


- Genetic Exchange





# Why Reptiles and Amphibians?



- Small Size & Slow Speed



# Why Reptiles and Amphibians?

- Long lives and low productivity

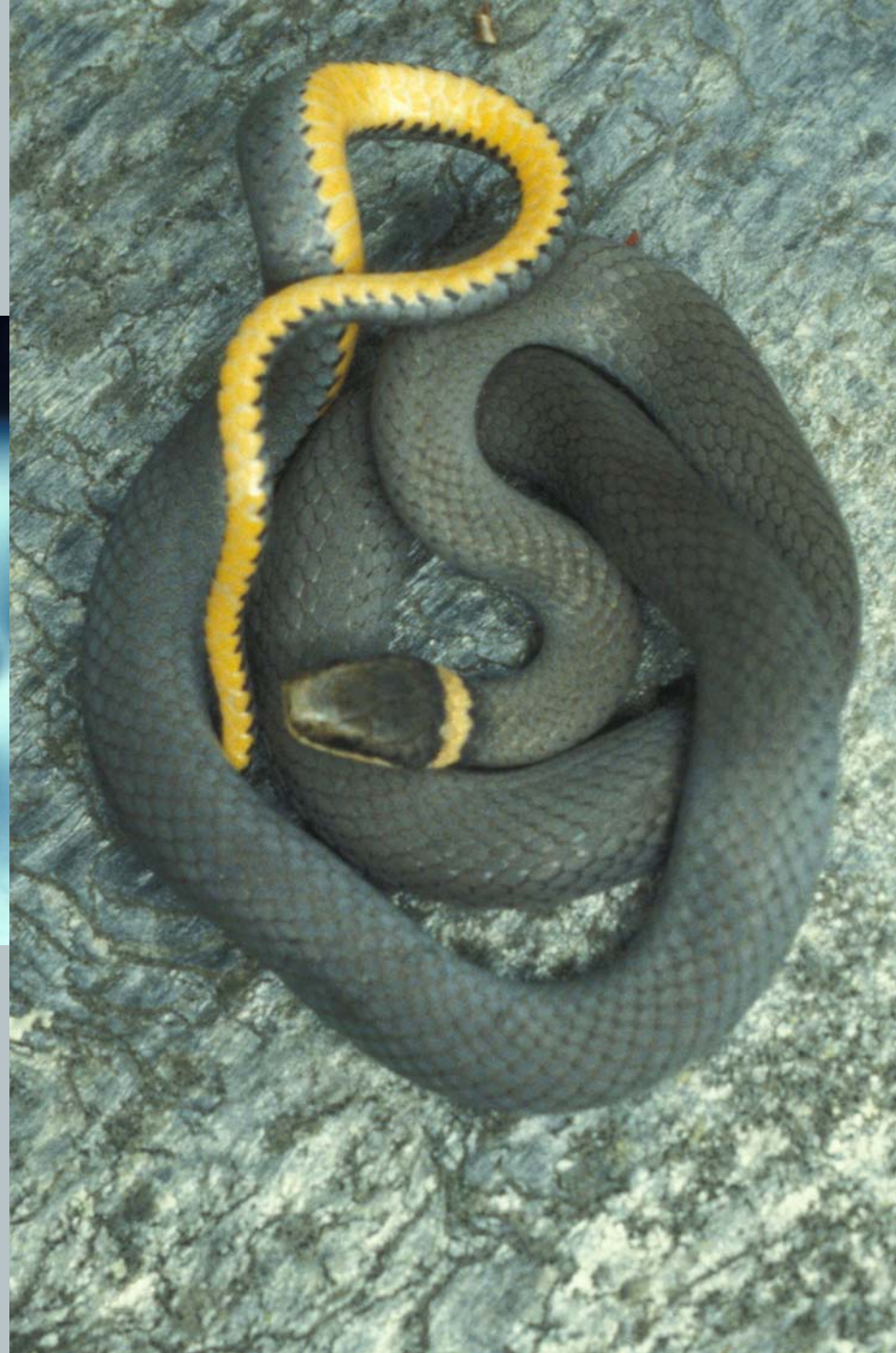




# Why Reptiles and Amphibians?



- Road surfaces and edges can attract some species





# Road Construction

- Consumes, fragments, and degrades habitat.



# Road Construction

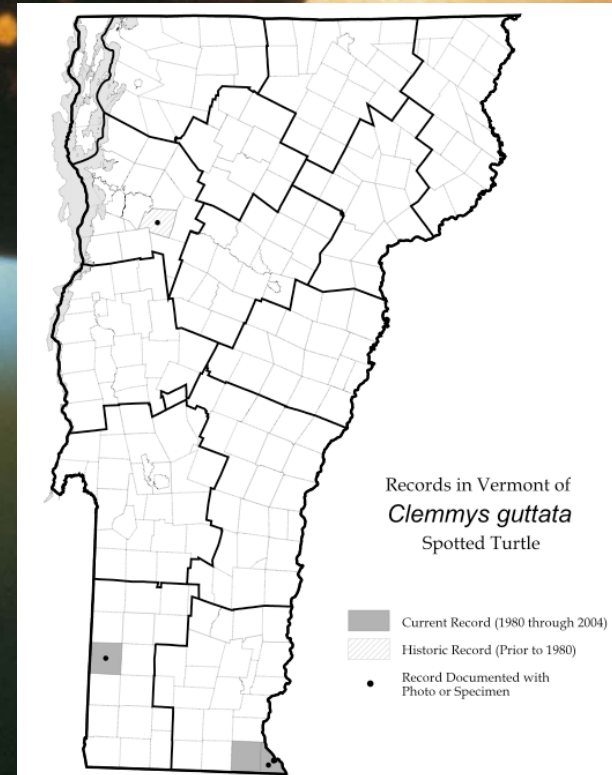


- Encourages additional development along newly constructed roads and intersections.



# Road Construction

- Creates additional opportunities for pollution, collection, the spread of exotics, and the spread of disease.





# Road Construction



- Causes the direct mortality of herptiles using and crossing roads and hence depletes or eliminates populations in the vicinity of their roads and their associated developments



# Transportation Related Goals

Locate and map significant crossing areas

Significant?

- Where rare, threatened, or endangered species are crossing.
- Where concentrations of common species are crossing.
- Where a wide diversity of species are crossing.







# Transportation Related Goals

- Create permeability in these areas



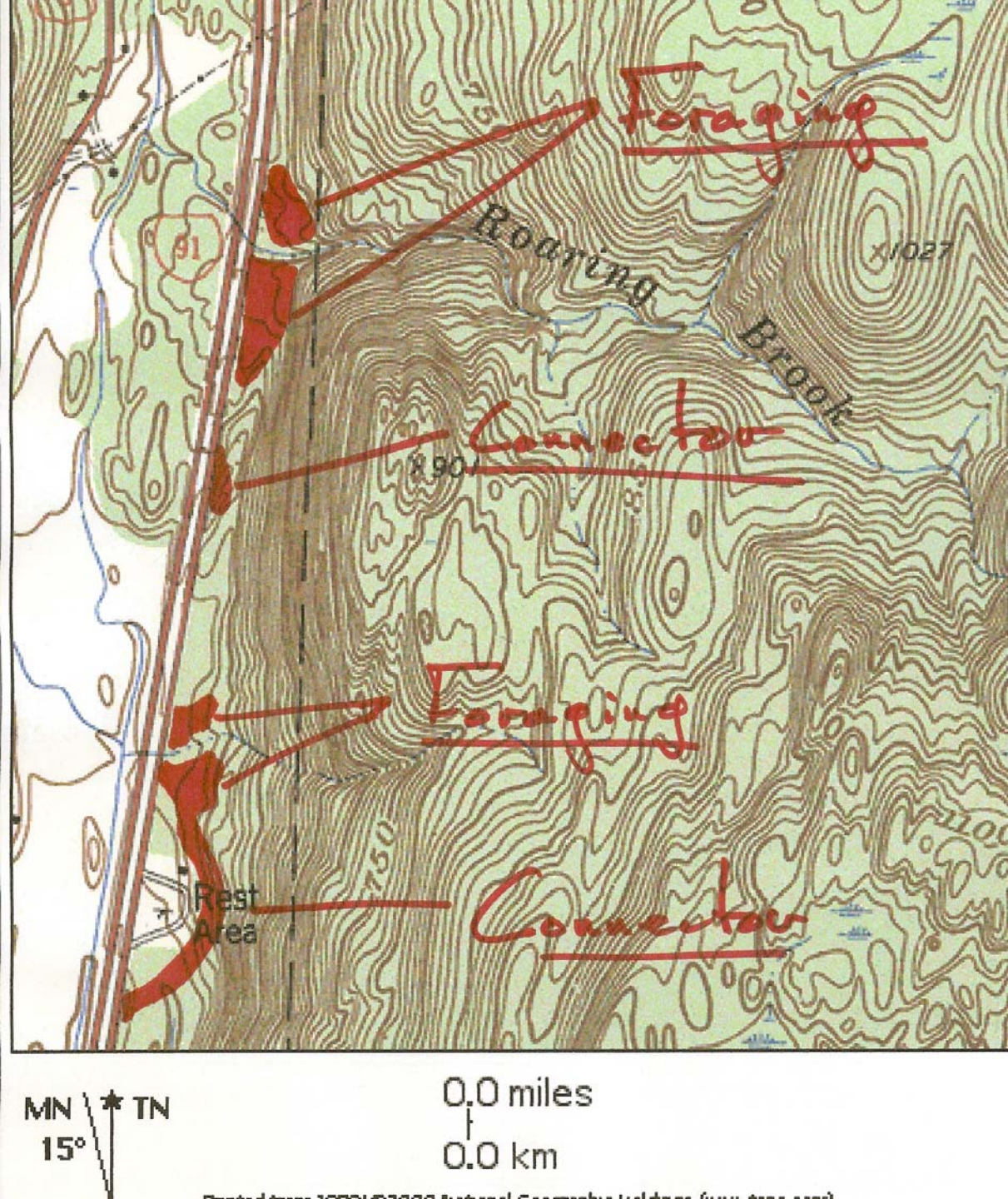
# Transportation Related Goals

- **Minimize the degradation of Important Habitat**



# Transportation Related Goals

- Replace and Enhance habitat where needed





## Transportation Related Goals

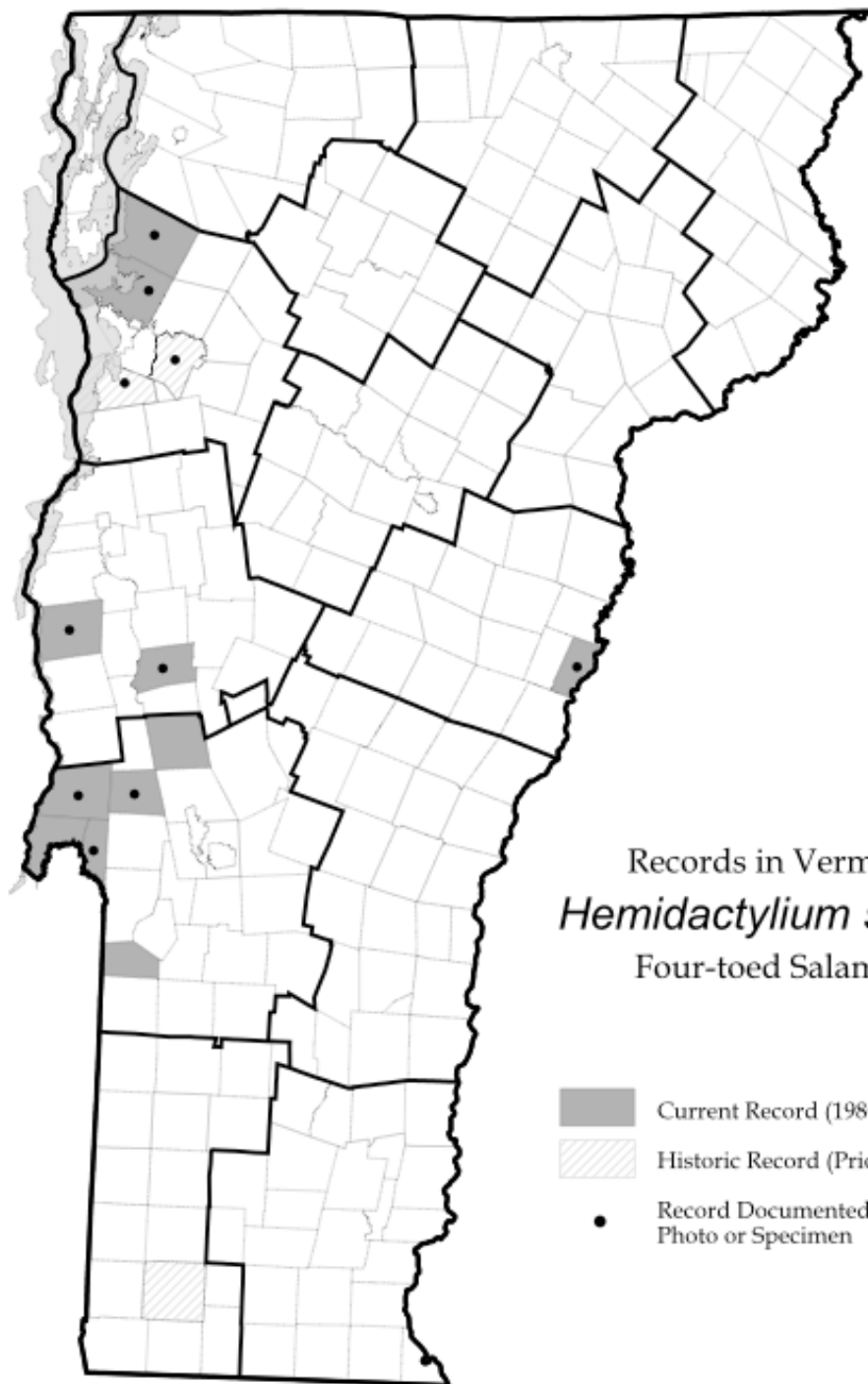


- Incorporate biodiversity concerns in short- and long-range transportation planning









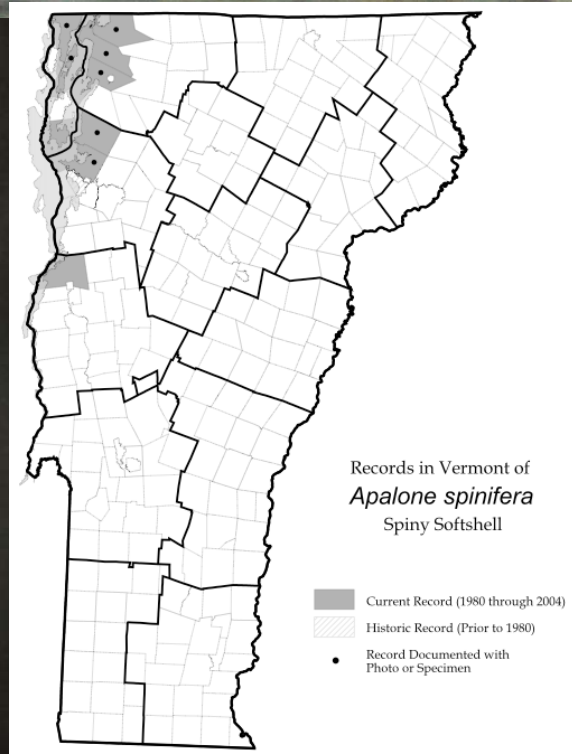
Records in Vermont of  
*Hemidactylium scutatum*  
Four-toed Salamander

- Current Record (1980 through 2004)
- Historic Record (Prior to 1980)
- Record Documented with Photo or Specimen

















# Putting the pieces together

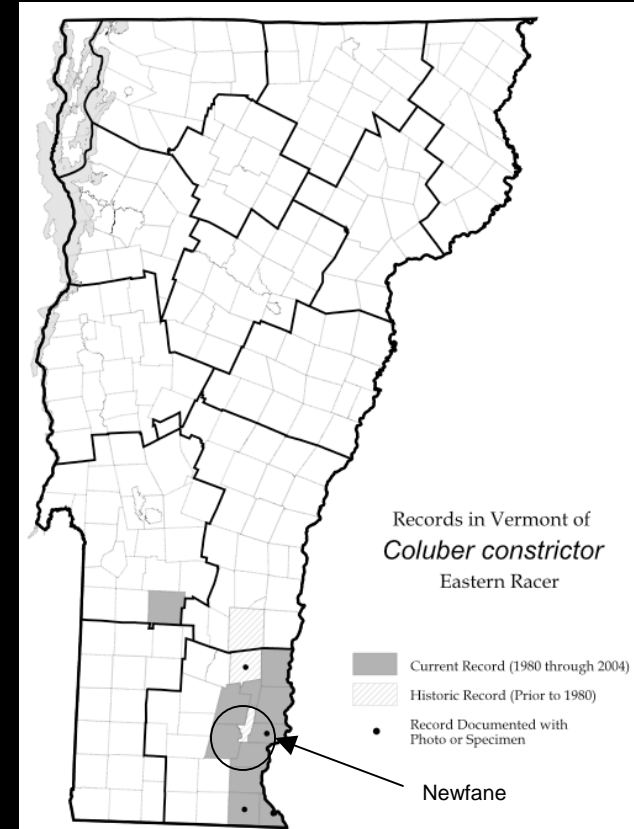
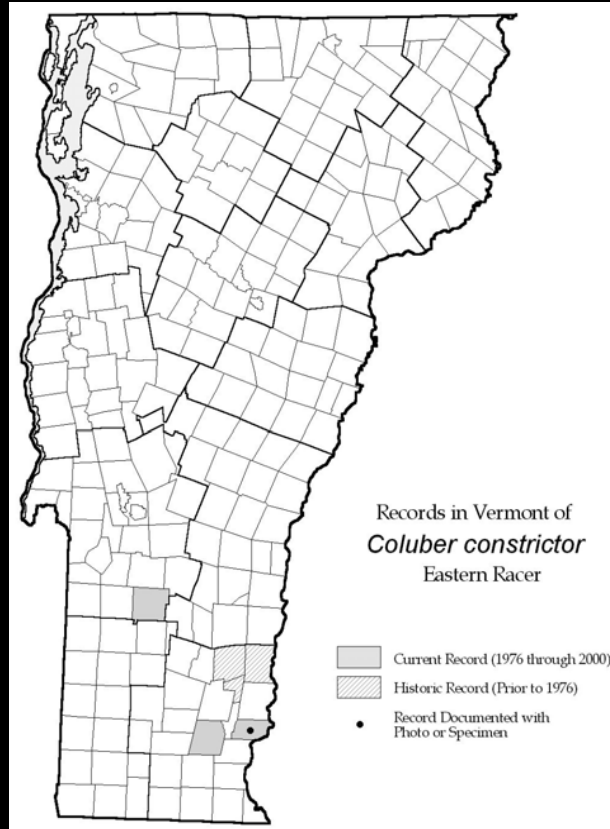
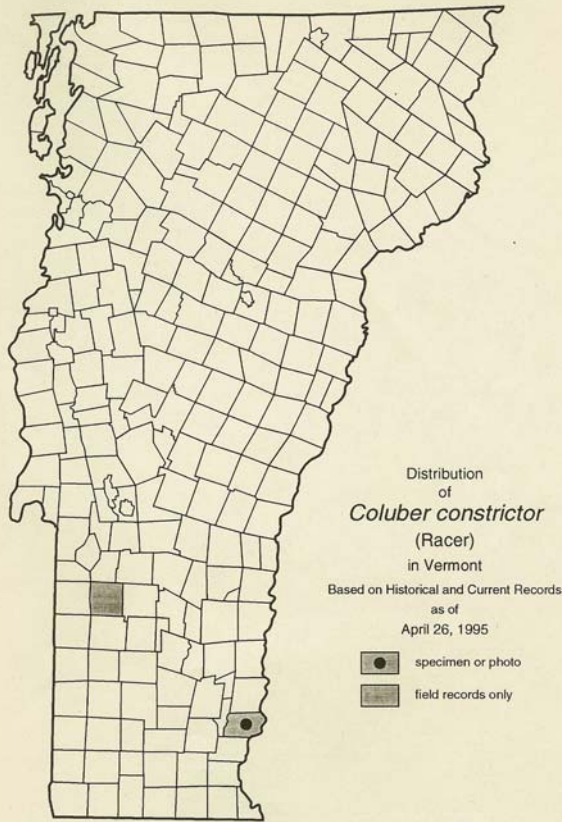


The Vermont  
Reptile &  
Amphibian  
Atlas





# Racers in Vermont







# Future Truck-weighing Station







# Questions to be answered

- Denning?
- Egg laying?
- Foraging?
- How central is this property to their needs?





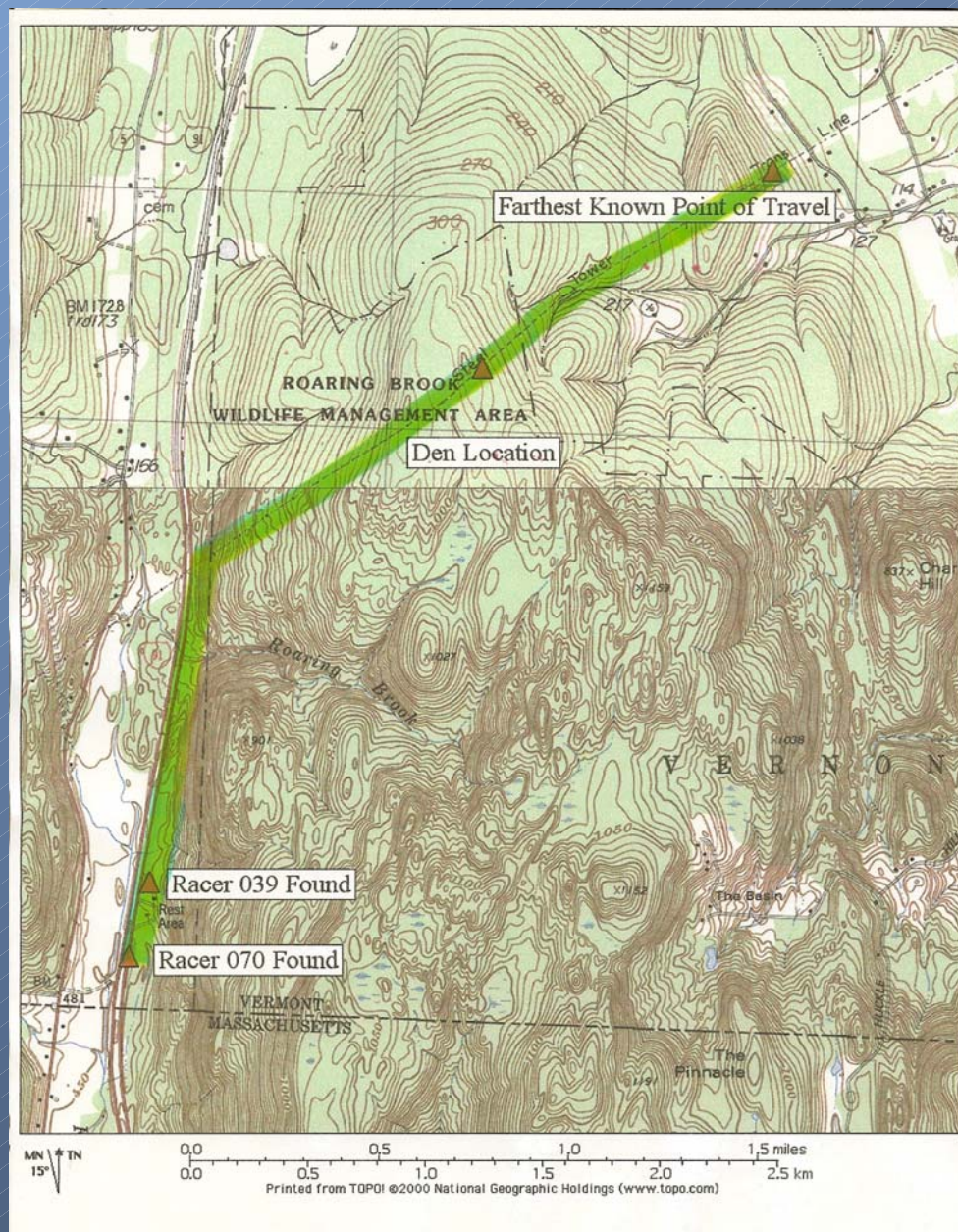
# Radio Telemetry







# Radio Telemetry 2004 - 2007





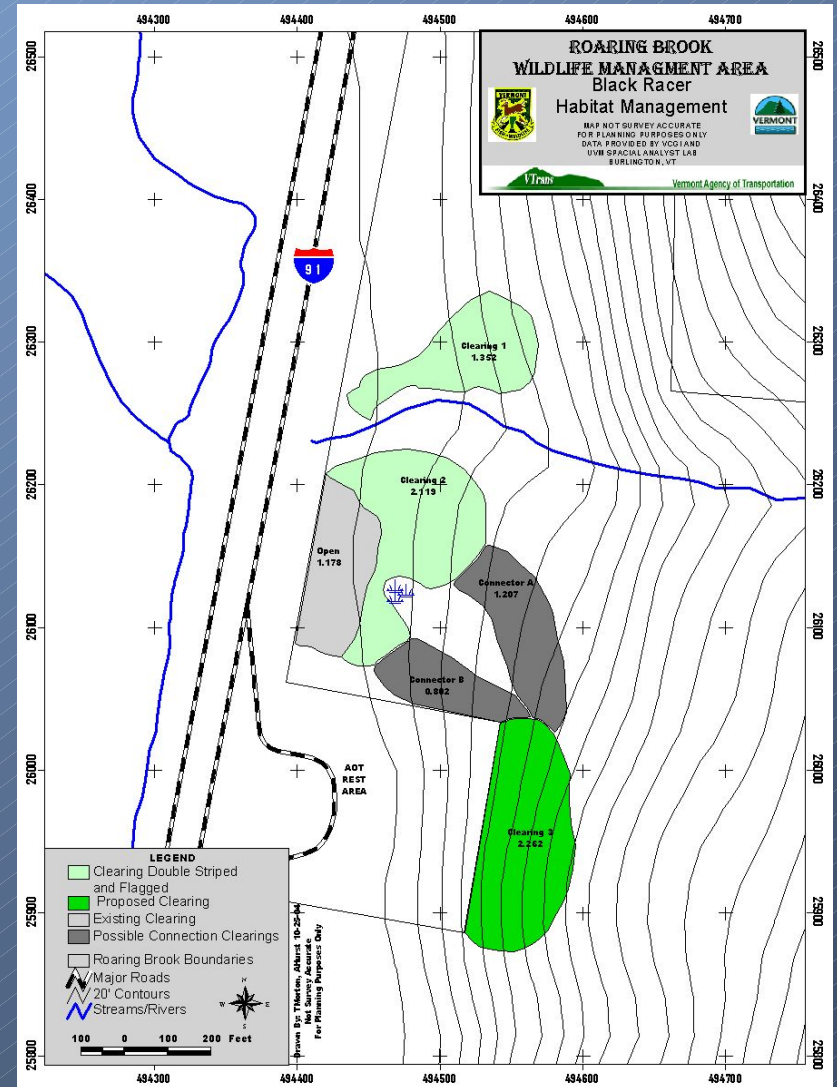
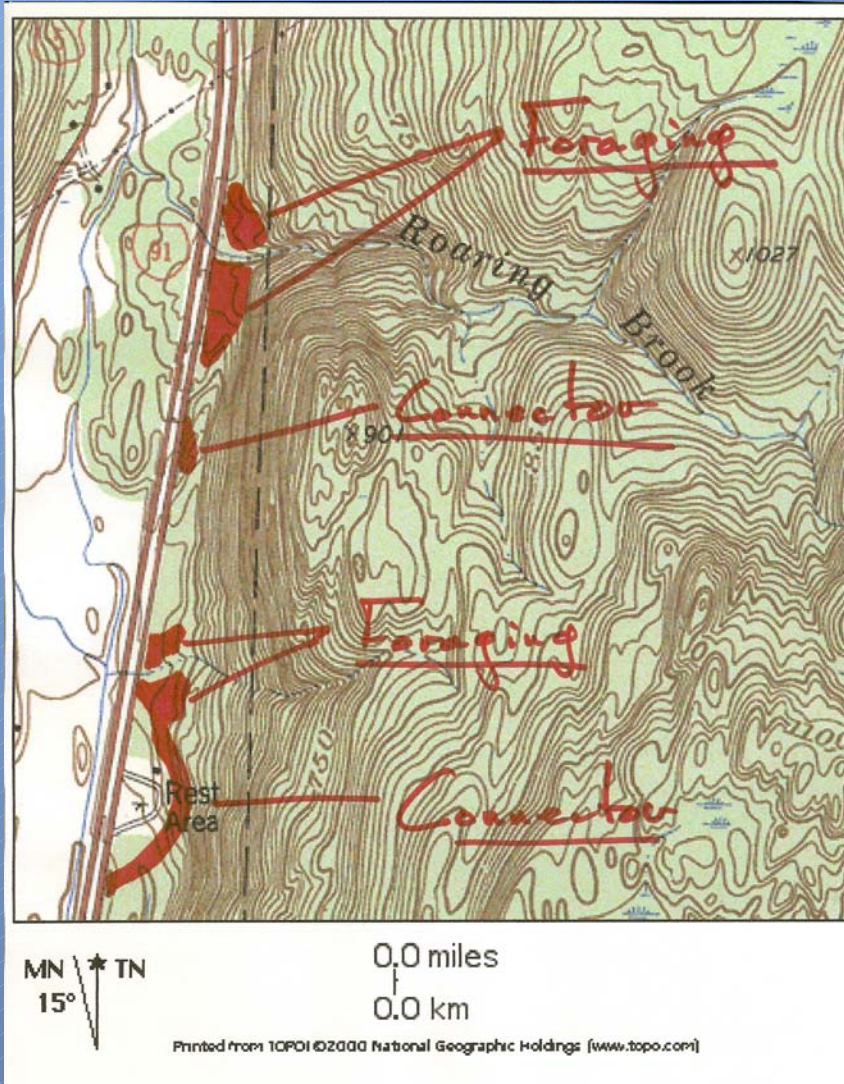


April  
2005 -  
2007



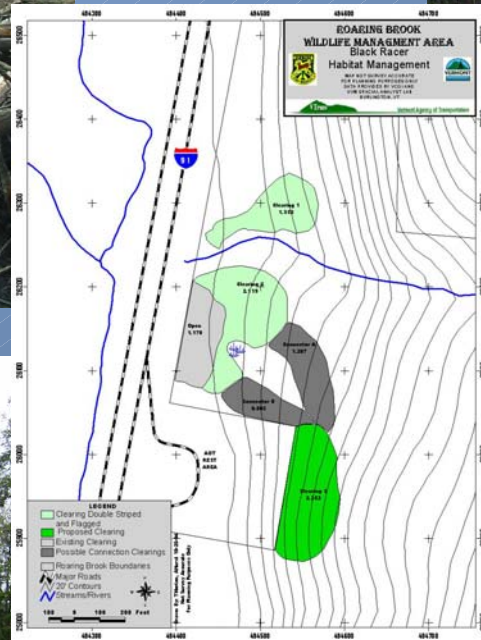


# Habitat Replacement





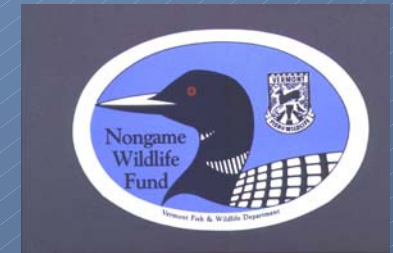
# Habitat Replacement







# A Cooperative Approach





# Acknowledgements

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